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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/496,516	02/02/2000	Peter F. Zalud	SAR 12165	6354

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EXAMINER

AHN, SAM K

ART UNIT	PAPER NUMBER
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2634

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DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/496,516	ZALUD ET AL.	
	Examiner	Art Unit	
	Sam K Ahn	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-24 is/are allowed.
- 6) ☒ Claim(s) 15-19 and 21 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: It is suggested to change "1208", in line 14, page 11 to "120B", and "COUNT1", in line 13, page 18 to "COUNT2".

Appropriate correction is required.

2. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

The abstract of the disclosure is objected to because the content of the abstract does not match with the claimed invention. Abstract discloses an encoding system while claims recite a decoder. Correction is required. See MPEP § 608.01(b).

Claim Objections

3. Claim 20 is objected to because of the following informalities: It is suggested to change “a third data value” to “the third data value” as its depending claim 17 already recites this value. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 15, 17-19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekigawa et al. ('050) in view of Nimishakavi ('763).

Regarding claim 15, Sekigawa teaches apparatus comprising receiving means, counter means, data means and signal generating means, which is entitled as an integrator.

Sekigawa teaches 30 in Fig.3 receiving HS signal having two different values as shown in Fig.4. The counting circuit increases its counter (counter means, 31) when HS is in a logic H, and decreases when HS is in a logic L. The counter value is then compared to a predetermined value to determine whether sampling circuit (40) produces logic H or L in a second signal, JS. (note col.3, lines 3-20, col.3, line 54-col.4, line 10) However, Sekigawa does not teach two predetermined values in determining a second signal

comprising a high and low logic or third and fourth data value. Sekigawa uses only one predetermined value as a criterion to differentiate third or fourth data value produced. Nimishakavi teaches this limitation. Nimishakavi teaches that when a counter reaches a first predetermined value one output pulse is sent. And when a second predetermined value is reached, a different output pulse is sent. (note col.5, lines 7-15) Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Sekigawa's teaching of one predetermined value as a criterion with Nimishakavi's teaching of two predetermined value, as this would produce a more accurate output. With only one predetermined value, the system is more lenient to errors. For example in counter value of 16, the system could make one error and have counter value of 15 or 17 and as a result produce an error in the output. However, with two predetermined value, the system would be less lenient. To this advantage, one would be motivated to include two predetermined values.

Regarding claim 19, Sekigawa in view of Nimishakavi teaches all subject matter claimed. Sekigawa teaches receiving means and counter means, as previously explained in regards to claim 15. However, Sekigawa does not teach limitation of a clock synchronization means. Nimishakavi teaches this limitation of producing a clock synchronization signal (RxDPPL Out) when the count value is equal to or greater than a first threshold value or predetermined value. (note col.5, lines 12-34)

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Regarding claims 17, 18 and 21, Sekigawa in view of Nimishakavi teaches all subject matter claimed, as applied to claim 15 or 19. Further limitation of preventing count value exceeding above maximum or minimum value is inherent. Nimishakavi discloses minimum and maximum value of the counter as 0 and 31. Therefore, it serves no purpose for the counter to be counting beyond the range given.

5. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sekigawa et al. ('050) in view of Nimishakavi ('763) in further view of Lu ('773).

Regarding claim 16, Sekigawa in view of Nimishakavi teaches all subject matter claimed, as applied to claim 15. However, does not teach all comprising elements in claim 16 comprised in a low pass filter. Lu teaches this limitation. Lu teaches an up/down counter and a logical circuit comprised in a digital low pass filter. Therefore, it would have been obvious to one skilled in the art at the time of invention to comprise all previously claimed elements in a low pass filter for the purpose of removing any noise. (note abstract, col.5, lines 31-47)

Allowable Subject Matter

6. Claims 22-24 are allowable. Prior art does not teach a decoder comprising an integrator and a discriminator comprising all the elements recited in claim 22.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited as having relevant subject matter in regards to decoding encoded signal.

Giles et al. ('064)

Quesnell, Jr. ('211)

Wight ('114)

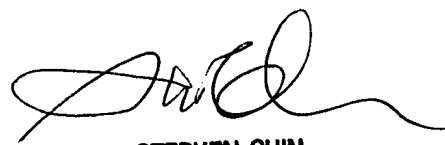
Boytim et al. ('212)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam K Ahn whose telephone number is 703-305-0754. The examiner can normally be reached on Mon-Fri 9am - 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

SKA
April 3, 2003



STEPHEN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

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